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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/026,121

12/17/2001

Sergiy Victorovich Vasylyev

5045

25945

7590

03/17/2005

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EXAMINER

ROBINSON, MARK A

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,121

Applicant(s)

VASYLYEV ET AL.

Examiner

Mark A. Robinson

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-25,27,28 and 30-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-25,27,28 and 30-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/23/05 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19-25,27,28 and 30-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popovich (US 4337759) in view of Pelka (US 6473554).

Art Unit: 2872

Popovich shows a collection apparatus including an array of spaced apart reflectors(51) with inclined ends and which are positioned to reflect radiation by means of a single reflection (see fig. 4b) to elongated energy receiving means (15--note the discussion concerning use of a fluid-carrying pipe or heat sink in col. 5 lines 25-27, or a photovoltaic cell in col. 3 lines 40-60). Popovich's device satisfies the claimed conditions for angles α and β as can be seen in fig. 4b. Note also that the reflectors are arranged so as to minimize screening. Popovich teaches an axle/tracking system in col. 3 lines 40-60. Regarding the amendments to claim 19, Popovich teaches linear mirrored (metal-coated) surfaces (providing for specular reflection) in col. 4 line 31.

Popovich does not teach the reflectors to have concave profiles. However, it is known to provide internal reflecting surfaces with curved profiles and an example is shown by Pelka (note figs. 15 and 16 and col. 13). Note that Pelka also discloses the surfaces defined in claims 31-35 and 39 as discussed in the last paragraph of col. 13. It would have been obvious to the ordinarily skilled artisan at the time of invention to use Pelka's concave surfaces in Popovich's device in order to increase the amount of radiation convergence directed to the energy receiving means.

Art Unit: 2872

Regarding claims 37 and 38, Popovich in view of Pelka shows two arrays of reflectors, but does not teach means for supporting the reflectors such that they are individually adjusted or moved (whether by themselves or as part of an array). However, means for individually supporting reflectors in this manner is well known in the art, and modifying the reflectors of Popovich in view of Pelka accordingly would have been obvious at the time of invention to provide increased flexibility/adjustability in positioning of the reflectors.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Federmann shows a curved internal reflecting surface in a light collecting device. Cowling shows a light collecting apparatus with a segmented reflector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Robinson whose telephone number is (571) 272-2319.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn, can be reached at (571) 272-2312. The fax phone number for the

Art Unit: 2872

organization where this application or proceeding is assigned is
(703) 872-9306.

Any inquiry of a general nature or relating to the status
of this application or proceeding should be directed to the
receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be
obtained from the Patent Application Information Retrieval
(PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status
information for unpublished applications is available through
Private PAIR only. For more information about the PAIR system,
see <http://pair-direct.uspto.gov>. Should you have questions on
access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

MR

3/15/05


MARK A. ROBINSON
PRIMARY EXAMINER